LISTING OF CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (Currently Amended): ~~Digital transmission~~ A method of determining a decoded information quality parameter for a digital data transmission with error-correcting coding comprising [[,]] ~~before a step~~ steps of:

performing error-correcting coding of the digital data;

transmitting the digital data with error-correcting coding;

receiving the digital data with error-correcting coding; ~~on a channel, a coding procedure for generating, from a source information item, a coded information item comprising at least one redundant information item and, after the step of transmitting on the channel, a~~

decoding the received digital data with error-correcting coding using a turbo decoding process to determine a decoded characteristic statistical quantity from a set of ~~procedure for obtaining, from a received information item to be decoded an estimate of the source information item with correction of transmission errors based on the at least one redundant information item, the coding procedure comprising a plurality of elementary coding steps associated with a plurality of interleaving steps performed in parallel or in series, the decoding procedure being iterative and comprising, for each iteration, a plurality of elementary decoding steps which correspond to the said plurality of elementary coding steps, the elementary decoding steps associated with a plurality of de-interleaving steps corresponding to the interleaving steps, each of the elementary decoding steps generating at least one~~ weighted output information; and

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determining a decoded information quality parameter from the determined decoded

characteristic statistical quantity and at least one configuration parameter,

wherein the determined ~~item that is transmitted to one or more other elementary~~

~~decoding steps, the method further comprising a characteristic quantity determination step for~~

~~calculating at least one characteristic quantity from a set of the weighted output information~~

~~items generated in at least one of the elementary decoding steps, the at least one characteristic~~

~~quantity including a statistical function associated with the elementary decoding steps and a~~

decoded information quality parameter ~~determination step for determining, from the at least~~

~~one characteristic quantity and at least one configuration parameter, a decoded information~~

~~quality parameter associated with a set of decoded information items corresponding to the set~~

~~of weighted output information items~~ is a numerical scalar or an integer number representing a

probable number of errors existing in a set of decoded information items, and when the

determined decoded information quality parameter is the numerical scalar, using the numerical

scalar to determine a weighting factor.

Claim 2 (Currently Amended): ~~Digital transmission~~ The method according to claim 1,

wherein the determined decoded information quality parameter is used to determine said

weighting factor after the decoding step ~~procedure~~.

Claim 3 (Currently Amended): ~~Digital transmission~~ The method according to claim 1,

wherein the determined decoded information quality parameter is used to determine said

weighting factor during a subsequent turbo-decoding process iteration of the decoding step

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procedure.

Claim 4 (Currently Amended): ~~Digital transmission~~ The method as in any one of the preceding claims, wherein ~~each of~~

the ~~turbo decoding process includes~~ elementary decoding steps ~~uses~~ each using part of the received digital data with error-correcting coding ~~information, which corresponds~~ corresponding to a redundant information item associated with ~~the~~ a corresponding elementary coding step, for generating an output including an information item comprising an extrinsic information item transmitted at least to one or more other elementary decoding steps, the turbo decoding process elementary decoding steps being iterated,

transmitting at least one extrinsic information item obtained during one iteration ~~being transmitted~~ of the turbo decoding process to another iteration of the turbo decoding process, and

the determining of the decoded characteristic statistical quantity ~~determination step~~ includes[[,]] ~~calculating~~ determining the ~~at least one~~ decoded characteristic statistical quantity ~~during an elementary decoding step~~ from a set of extrinsic information items at the output of at least one ~~the~~ said elementary decoding step.

Claim 5 (Canceled)

Claim 6 (Currently Amended): ~~Digital transmission~~ The method according to claim 4, wherein the determined decoded characteristic statistical quantity ~~function~~ is a mean of an

absolute value of ~~the~~ extrinsic information ~~calculated~~ <u>determined</u> from the set of extrinsic

information items.

Claim 7 (Canceled).

Claim 8 (Currently Amended): ~~Digital transmission~~ <u>The</u> method according to Claim

1, wherein <u>the determining of</u> the ~~decoded information quality parameter determination step~~

~~determines the decoded information quality parameter from a~~ <u>decoded</u> characteristic <u>statistical</u>

quantity ~~calculated in the characteristic quantity determination step during an elementary~~

~~decoding step from a set of weighted output information items of the elementary decoding~~

~~step and other~~ <u>includes</u> characteristic <u>statistical</u> quantities ~~calculated~~ <u>determined</u> during

previous elementary decoding steps ~~from sets of weighted output information items~~

~~corresponding to the set of weighted output information items of the elementary decoding~~

~~step, and at least one configuration parameter, the said decoded information quality parameter~~

~~being associated with a set of decoded information items corresponding to the set of weighted~~

~~output information items of the elementary decoding step~~<u>.</u>

Claim 9 (Currently Amended): ~~Digital transmission~~ <u>The</u> method according to claim 8,

wherein the <u>determining of the</u> decoded information quality parameter ~~determination step~~

determines the decoded information quality parameter from <u>the decoded</u> characteristic

<u>statistical</u> quantities ~~calculated~~ <u>determined</u> during an elementary decoding step corresponding

to ~~the~~ <u>a</u> last elementary decoding step in the <u>turbo</u> decoding ~~procedure~~ <u>process</u>.

Claim 10 (Currently Amended): ~~Digital transmission~~ The method according to claim 8, wherein the <u>determining of the</u> decoded information quality parameter ~~determination step~~ determines the decoded information quality parameter from a single <u>decoded</u> characteristic <u>statistical</u> quantity ~~calculated~~ <u>determined</u> during ~~the~~ <u>a</u> last elementary decoding step in the <u>turbo</u> decoding ~~procedure~~ <u>process</u>.

Claim 11 (Currently Amended): ~~Digital transmission~~ The method according to Claim 1 wherein the <u>determined</u> decoded information quality parameter includes ~~an~~ <u>is the</u> integer number representing the probable number of errors which exist in the set of decoded information items.

Claim 12 (Canceled).

Claim 13 (Currently Amended): ~~Digital transmission~~ The method according to Claim 1, wherein the <u>at least one</u> configuration parameter includes a parameter ~~characterising~~ <u>characterizing</u> decoding conditions.

Claim 14 (Currently Amended): ~~Digital transmission~~ The method according to Claim 1, wherein the <u>at least one</u> configuration parameter includes a parameter ~~characterising~~ <u>characterizing</u> transmission conditions.

Claim 15 (Currently Amended): ~~Digital transmission~~ The method ~~of the error-correcting coding type~~ according to Claim 1, wherein the at least one configuration parameter includes a signal to noise ratio.

Claim 16 (Currently Amended): ~~Digital transmission~~ The method according to Claim 1, wherein the determining of the decoded information quality parameter ~~determination step~~ uses a predetermined algorithm allowing ~~calculation~~ determining of the decoded information quality parameter as a function of ~~the~~ one or more configuration parameters and one ~~of~~ or more ~~of the~~ determined decoded characteristic statistical quantities.

Claim 17 (Currently Amended): ~~Digital transmission~~ The method according to Claim 1, wherein the determining of the decoded information quality parameter ~~determination step~~ uses a predetermined reference table to select a decoded information quality parameter as a function of one or more configuration parameters and one ~~of~~ or more ~~of the said~~ determined decoded characteristic statistical quantities.

Claim 18 (Currently Amended): ~~Digital transmission~~ The method according to Claim 1, wherein ~~the~~ each received information item is processed by means of N-bit decoding sequences to provide a set of decoded information items as a sequence of binary information items containing N symbols.

Claim 19 (Currently Amended): ~~Digital transmission~~ The method according to Claim

1, wherein ~~the~~ each received information item is processed by means of decoding sequences to provide a set of decoded information items as a sequence of binary information items representing a fraction of a decoding sequence.

Claim 20 (Currently Amended): ~~Digital transmission~~ The method according to Claim 1, wherein the turbo decoding process includes elementary decoding steps ~~have~~ each having inputs and outputs weighted in terms of probabilities, likelihood ratios, or log likelihood ratios.

Claim 21 (Currently Amended): ~~Digital transmission~~ The method according to Claim 1, wherein the error-correcting coding ~~procedure~~ comprises at least one puncturing step and the decoding ~~procedure~~ using a turbo decoding process comprises at least one corresponding de-puncturing step.

Claim 22 (Currently Amended): ~~Digital transmission~~ The method according to Claim 1, wherein ~~in a combination of transmission methods using~~ a number of channels are provided to each receive the transmitted digital data with error-correcting coding with each channel including different tubo decoding ~~procedures associated with the same coding procedure~~ processes, decoded information quality parameters obtained respectively at the end of each of the different turbo decoding ~~procedures~~ process being used to form different weighting factors ~~for the corresponding sets of decoded information items used to form a weighted combination of the sets~~.

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Claim 23 (Canceled).

Claim 24 (New): The method according to Claim 16, wherein there are a plurality of

the configuration parameters and a plurality of the determined decoded characteristic

statistical quantities.

Claim 25 (New): The method according to Claim 17, wherein there are a plurality of

the configuration parameters and a plurality of the determined decoded characteristic

statistical quantities.